### U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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#### **MOLYBDENUM IN NOVEMBER 1996**

Domestic production of molybdenum in concentrate decreased 6% in November 1996 compared with that of the previous month and was 5% less than in November 1995, according to the U.S. Geological Survey. Producer molybdenum stocks in concentrate, oxide, and other product forms were 8,930 metric tons at the beginning of 1996 and 5,820 metric tons at the end of November.

Included in this Mineral Industry Surveys are U.S. production, shipments, and stocks of molybdenum concentrates and materials, plus U.S. consumption by end use of molybdenum in November 1996. Also included are trade data for October 1996. During November, <u>Platt's Metals Week U.S.</u> monthly

average price for molybdenum concentrate was \$5.401 per kilogram (\$2.450 per pound). The average price for dealer molybdenum oxide was \$8.818 per kilogram \$4.000 per pound) and that for dealer ferromolybdenum was \$11.155 per kilogram (\$5.060 per pound).

For the week ending January 31, 1997, <u>Platt's Metals Week</u> U.S. average price for molybdenum concentrate was \$4.960 per kilogram (\$2.250 per pound). The average price for dealer molybdenum oxide was \$10.306 per kilogram (\$4.675 per pound) and that for ferromolybdenum was \$11.904 per kilogram (\$5.400 per pound).

## $\begin{tabular}{ll} TABLE & 1 \\ U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS & 1/ \\ \end{tabular}$

(Metric tons, contained molybdenum)

		1996			
Item	1995 p/	October	November	Year to date 2/	
Production	58,000	4,670	4,410	50,900	
Shipments: 3/					
Domestic	13,700	1,330	1,280	14,700	
Export	18,600	1,430	1,110	18,400	

p/ Preliminary.

- 1/ Data are rounded to three significant digits.
- 2/ May include revisions to previous months' data.
- 3/ As reported by producers.

TABLE 2 U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS IN NOVEMBER 1996 1/

(Hundred kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb- denum 2/	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
Steel:			<b>,</b>			
Carbon	406	261			W	667
Stainless and heat-resisting	2,180	106			W	2,290
Full alloy	2,130	1,140			36	3,310
High-strength low-alloy	551	248				799
Tool	892	45			W	937
Cast irons	17	496			W	513
Superalloys	816	W		334	388	1,540
Alloys:						
Welding materials (structural and hard-facing)		W			W	W
Other alloys 3/		W		5	W	5
Mill products made from metal power					W	W
Chemical and cereamic uses:						
Pigments			13			13
Catalysts	773		W		W	773
Other	W				W	W
Miscellaneous and unspecified	10	182	759		1,830	2,780
Total	7,770	2,480	772	339	2,260	13,600
Stocks, November 30, 1996	4,790	1,630	88	506	8,220	15,200

W Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified."

 ${\bf TABLE~3}$  U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS 1/

(Metric tons, contained molybdenum)

		1996			
Product	1995 p/	October	November	Year to date 2/	
Gross production	46,000	4,700	3,240	41,900	
Molybdenum product 3/					
used to make other products	23,100	2,150	2,340	21,700	
Shipments	24,000	2,630	1,280	22,200	

p/ Preliminary.

- 1/ Data are rounded to three significant digits.
- 2/ May include revisions to previous months' data.
- 3/ Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> Includes calcium molybdate.

<sup>3/</sup> Includes magnetic and nonferrous alloys.

# TABLE 4 U. S. EXPORTS OF MOLYBDENUM ORE AND CONCENTRATE (Including roasted concentrate), BY COUNTRY 1/

(Hundred kilograms, contained molybdenum)

		1996			
Country	1995 p/	September	October	Year to date	
Australia	650	80	76	530	
Belgium	103,000	11,000	7,290	112,000	
Brazil	1,580	2	8	204	
Canada	7,590	128	113	2,250	
Chile	62,900	6,850	10,000	55,900	
China		2,710	2,450	9,300	
France				56	
Germany	7,700	544	473	5,050	
India		387	199	586	
Italy	1,370	226	1,760	3,220	
Japan	54,900	3,170	3,560	42,000	
Korea, Republic of	2				
Mexico	40,400	3,860	5,850	49,000	
Netherlands	112,000	3,570	6,060	52,900	
Singapore	1				
Spain	121				
Sweden	6,300	114	1,020	3,700	
Switzerland	324				
Taiwan	6				
United Kingdom	47,400	3,690	2,220	55,800	
Venezuela	5				
Total	446,000	36,400	41,100	393,000	

p/ Preliminary.

Source: Bureau of the Census.

 ${\bf TABLE~5}$  U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY 1/

(Hundred kilograms, contained molybdenum)

Country		1996				
	1995 p/	September	October	Year to date 2/		
Australia	8					
Canada	2,140	394	247	1,950		
China						
Egypt	9					
Japan	1,050		13	1,150		
Korea, Republic of				19		
Malaysia	223			372		
Mexico	2,010	217	51	998		
Netherlands	737					
Singapore		15	85	507		
Spain	234			12		
Taiwan	485					
Venezuela				8		
Total	6,920	626	396	5,020		

p/ Preliminary.

Source: Bureau of the Census.

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> May include revisions to previous months' data.

 ${\bf TABLE~6} \\ {\bf U.S.~IMPORTS~FOR~CONSUMPTION~OF~MOLYBDENUM~PRODUCTS~1/}$ 

(Hundred kilograms unless otherwise specified)

		1995 January-December			1996 January-October		
	Gross	Contained	Value	Gross	Contained	Value	
Material	weight	molybdenum	(thousands)	weight	molybdenum	(thousands)	
Ore and concentrates roasted	74,300	47,800	\$73,400	67,700	46,300	\$34,300	
Ore and concentrates other	15,000	7,930	8,040	351	210	169	
Molybdenum chemicals:							
Oxides and hydroxides	9,180	NA	11,400	8,530	NA	6,320	
Molybdates of ammonium	3,450	1,860	2,880	5,720	3,040	4,700	
Molybdates (all others)	540	420	285	823	362	495	
Molybdenum orange	6,740	NA	2,270	15,500	NA	4,810	
Mixtures of inorganic							
compounds	6	5	130				
Ferromolybdenum	65,500	41,900	74,600	70,000	44,100	49,700	
Molybdenum powders	1,950	1,460	5,590	966	853	2,610	
Molybdenum unwrought	1,310	1,020	3,560	791	741	2,060	
Molybdenum waste and scrap	4,530	4,300	6,310	6,470	5,960	9,170	
Molybdenum wrought							
Molybdenum wire		NA	277	18	NA	285	
Molybdenum other		NA	993	34	NA	891	
Total	183,000	107,000	190,000	177,000	102,000	115,000	

NA Not available.

Source: Bureau of the Census.

 $<sup>1/\,\</sup>mathrm{Data}$  are rounded to three significant digits; may not add to totals shown.